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Historical Acoustemology: Past, Present, and Future

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ABSTRACT: This article surveys the field and methodology of historical acoustemology, an interdisciplinary area of study dedicated to understanding past sounds, hearers, and listeners in their historical contexts. The article charts the field's emergence in the late 1990s and early 2000s, accounts for the field's present trends (which center on the politics of listening subjectivity), and identifies future directions of inquiry. The article argues that historians should take account of a broader spectrum of past listeners, not just listening experts, and develop greater criticality about their own knowing-through-listening. The article makes the case for a future sound historical field grounded in the analysis of nonwritten sources, particularly sound archives and material culture, and argues that the use of new digital methods and the engagement of listening publics through a new public sound history should also become central to the work of the sound historian.

KEYWORDS: historical acoustemology, sound studies, listening, soundscapes, public sound history

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Historical acoustemology is one of several possible labels for a field that does not yet have a settled name. Sound history, auditory history, aural history, and historical sound studies are among the other terms used to describe a field of research dedicated to past sound, hearing, and listening. Historical acoustemology is, in fact, perhaps better understood as a *provocation to* than as a *label for* this body of work. Building on the original definition by fellow anthropologist Steven Feld (1982), Tom Rice (2018, 1) explains that acoustemology is "a portmanteau word combining 'acoustic' and 'epistemology' to foreground sonic experience as a way of knowing." This article introduces sound history's past, present, and possible future trajectories by interrogating its acoustemological practices. What kinds of past knowing-through-sound have historians recovered? How have historians "listened to" the past as a way of knowing it? As a young field, barely more than twenty years old, historical acoustemology has not only lacked a settled name but also opportunities for methodological self-reflection and critique. What follows is both a history of the field of sound history and a critical reflection on how it has listened and who it has heard. The three sections of the article—past, present, and future—are organized not strictly in terms of the field's chronology but rather according to what might be viewed as the origins, current urgencies, and underexplored possibilities of the history of sound, hearing, and listening. The article reviews English-language scholarship on historical acoustemology by researchers working in Canada, Denmark, Germany, the Netherlands, the UK, and the US.

PAST

A scholarly field dedicated to researching auditory history first emerged as a recognizable body of work in the late 1990s and early 2000s. Contributions came from both within and beyond the discipline of history. Social historians took the lead from the discipline of history, embracing elements of the "cultural turn" and the cultural anthropology of the senses to create a new kind of history that "listened to" the sounds of the past. Historians Alain Corbin (1998) on the importance of bells in French culture, Mark M. Smith (2001) on the sounds of

slavery and civil war in nineteenth-century America, and Richard Cullen Rath (2003) on American hearing communities and their transformation in the colonial era were the key authors in the new social history of sound. Emerging from a quite different tradition of the history of science and technology, the research of media theorist and historian Jonathan Sterne (2003) and historian of technology Emily Thompson (2004) centered on the nineteenth- and twentieth-century technological revolution in sound recording, reproduction, communication, and control. Scholars working in departments of literature were the third pillar of the new sound history. Literature and theatre scholar Bruce R. Smith's (1999) research on the oral cultures and listening environments of Shakespearean England and literary historian John M. Picker's (2004) work on "Victorian soundscapes" dealt with the auditory contexts and content of literary texts from the past. In a later work, Mark Smith (2004a) collected excerpts from several of these books, and others, to mark their connection as contributions to a new, interdisciplinary way of doing history, in which "historians are listening to the past with an intensity, frequency, keenness, and acuity unprecedented in scope and magnitude" (ix).

These early efforts quickly inspired a second generation of sound historical scholarship. Historians Karin Bijsterveld (2008), writing about noise abatement campaigns in twentieth-century Europe, and Alexandra Hui (2012), analyzing the inter-relations between aesthetics and science in the emergence of acoustical knowledge in nineteenth-century Germany, built on earlier work in the auditory history of science and technology. French studies scholar Aimée Boutin (2015) continued the tradition of literary sound history by examining the poetic treatment of nineteenth-century Parisian street cries. Art historian Niall Atkinson (2016) built on Bruce R. Smith's (1999) reinterpretation of early modern social space as a heard environment by examining the auditory dimensions of urban architecture in Renaissance Florence. Media historians, who had their own tradition of dealing with audio media, especially radio (Hilmes 1997; Lacey 1996), increasingly thought of themselves as involved in dealing with past sound cultures, rather than with only audio media. Media studies researcher Carolyn Birdsall's (2012) work on mediated sound in Nazi Germany marked the beginning of a shift in this direction and was followed by historian Rebecca Scales's (2016) examination of the auditory contexts of radio listening in interwar France. Ethnomusicologist Veit Erlmann (2010) set out a new intellectual history of sound, extending an approach initiated by historian Penelope Gouk (1999), which detailed an interest in "resonance" as well as "reason" in the Western intellectual tradition. Ambitious "deep" histories of the human listening experience took sound history to an even wider public readership. These included historian Hillel Schwartz's (2011) *Making Noise: From Babel to the Big Bang and Beyond* and media historian David Hendy's (2013) book *Noise: A Human History of Sound and Listening*. This growing body of scholarship not only retained the interdisciplinary character of the field mapped by Mark Smith (2004a) but also increasingly identified itself as part of a new, larger, interdisciplinary field known as sound studies. Sterne (2003, 2012) was among those who signaled a preference for the formation of this interdisciplinary field over the consolidation of a narrower sound history movement.

This body of historical scholarship on sound, especially in its earliest manifestations, is above all concerned with correcting what its authors perceived to be a visualist bias in histories and theories of modernity. Mark Smith (2004a, ix) described the field of history as "replete with emphases on the search for 'perspective' and 'focus' through the 'lens' of evidence" and noted its indebtedness to "the visualism of 'Enlightenment' thinking and ways of understanding the world." In particular, Sterne (2003) and others sought to overturn the theory put forward by influential media theorists Marshall McLuhan and Walter Ong that as modern societies shifted from oral to literate cultures with the coming of the printing press, they shifted in turn from a predominance of aural to primarily visual ways of knowing. Rath (2003) and Bruce Smith (1999) found evidence of thriving oral cultures and sonic ways of knowing evolving alongside the rise of literacy in early modern England and North America. Corbin (1998) argued that although the rise of modern clock time might have made bell ringing lose some of its power to structure social time and space, the cultural significance of bells persisted and was adapted to French modernity. (Regarding the importance of bells in modernity, see also Hernandez [2004] on Soviet Russia.) Mark Smith (2001) finds that proponents and adherents of industrial and social modernization

in nineteenth-century America experienced the modern in part as an altered sound world to be celebrated or rejected. Religious studies scholar Leigh Eric Schmidt (2000), another early contributor to sound history writing, details a thriving evangelical culture of auditory religious devotion in modern America, despite the imposition of silent reverence and textual theology in post-Enlightenment Protestantism. Modernity, in other words, was audible as well as visible.

Sterne (2003) goes the furthest in identifying and naming auditory modernity, describing the technological revolution in sound that evolved over the period 1750 to 1925 as an "Ensoniment" (2), an auditory equivalent to the Enlightenment, in which new scientific techniques of listening associated with telegraphy and telephony and new aural consumer goods associated with phonography underpinned a fundamentally sonic capitalist modernity. Emily Thompson (2004) identifies a distinctly "modern" kind of sound too, a non-reverberant sound in the office and the recording studio that emerged as a response to the noisiness of urban and industrial modernity and marked human mastery over acoustic nature. It is worth emphasizing that the early sound historians did not argue for the primacy of sound over vision in modern societies. Sterne's critique of the "audio-visual litany" (2003, 15)—the sharp separation between auditory and visual ways of perceiving the world and the romanticizing of the former set up by McLuhan, Ong, and others—set the record straight on this matter. Rather, sound history sought to critique narrowly visualist ways of understanding modernity, arguing that we cannot do justice to the multisensory culture of the modern that is evident in the historical record by limiting our historical imagination only to sight. Sterne (2003), in particular, brought sound technologies into the heart of the story of modernity, debunking once and for all the nostalgia for a lost, premodern world of oral/aural culture in theories of the modern.

The achievements of sound history were responsible in no small part for the rise of the wider field of sound studies, now a flourishing meeting point for humanities disciplines. These achievements fall into two main categories. First, sound history reimagined the historical subject as a hearing and listening subject. It demonstrates that past listeners were attuned to their sound environments and that these in turn shaped past listeners' sense of self and community. Corbin (1998) argues that historians have been oblivious to the ways in which people in the past relied on "the reading of sounds" such as bells in the "auditory landscape" because they "failed to listen in all humility to the men of the past with a view to detecting, rather than dictating, the passions that stirred them" (xx). The slaves held on southern American plantations discussed by Mark Smith (2004b) not only sang but also understood the power of silence, quiet, whispers, and screams in interactions with their masters: "Effective resistance to bondage lay in slaves' learning to control their own sounds and being attentive to the heard world" (371). Discussing a longer span of time, literature scholar Steven Connor (1997) connects the rise of modern subjectivity to the spatial and temporal scales afforded by sound communication technologies such as the telephone, describing the result as the "modern auditory I." Sterne (2003), working at a more granular level, shows just how important technical listening was to the professional identities of doctors, communication engineers, and ethnographers. Auditory subjectivity can also be molded through the channels of cultural and political power, for example, through the ritualized "singing along" with nationalist music radio broadcasts in wartime Nazi Germany discussed by Birdsall (2012, 103–140). Auditory subjectivity was not only an effect of new media technologies such as radio; it was also relevant, for example, to the "communities of speech" that Bruce Smith (1999) identifies in early modern England.

Second, sound history widened the cultural study of sound beyond music, traditionally practiced by the disciplines in departments and schools of music, to include a wide range of other kinds of sound as worthy of historical analysis—natural and industrial sounds, the sounds made by media technologies, the sounds of voice and speech, bells and sirens sounding in everyday life, cannon and musket fire, architectural echo and reverberance—none of which had been considered worthy of a history until now. The sonic categories of silence, noise, and quiet joined music as apparent and recoverable in the historical record. One of the defining features of early sound history is that it not only sought to recover nonmusical sounds but also explicitly sought out

a methodology that would challenge the dominance of music in thinking about sound. Mark Smith (2004c) writes that music "has received such thorough and expert treatment by others that to dwell on the topic would seem inappropriate." He adds, "I remain more interested in what historians of slave song and music have not heard: slave silence and quietude" (398). Historian of the arts Douglas Kahn (1999), writing in another early sound history, draws on avant-garde traditions of sound art to show that nonmusical sound, such as noise, was itself a source of artistic inspiration and creativity in modernist art movements, often as a direct challenge to the auditory logic of music. Musical sound *was* included in these historians' analyses of the auditory past but only on equal terms with speech, voice, silence, quiet, and hum, and, typically, only as a heard phenomenon or as a cultural logic structuring nonmusical forms such as science (Hui 2012; Gouk 1999) or philosophy (Erlmann 2010). Sterne (2003) argues that changes in nineteenth-century understandings of frequency caused the previously separate categories of music and speech to become "special cases of the general phenomenon of sound. Sound itself became the general category, the object of knowledge, research, and practice" (23). Although it did not reject engagement with music, sound history deliberately challenged music's place as a privileged form of past sound.

In search of a methodology for dealing with the sounds of the past, the early sound historians *could* have turned to the "new musicology" of the 1980s and 1990s, which had controversially sought to show that music was a product of its historical context rather than a "universal" language "beyond meaning" (Kramer 2003). Musicologist Susan McClary (1998), for example, argued that culturally specific gender relations are expressed in musical form, which, far from existing beyond cultural meaning, has an identifiable "sexual politics" rooted in history. However, sound historians did not find common ground with the new musicology's use of history as "context" to the musical "text." They were interested less in how history found its way into works of art and music, and more in how history itself was constituted by acts of sounding, hearing, and listening. If not from musicology, then from where did sound history take its inspiration? More than any other foundation, sound history drew on the conceptualization of the "soundscape" by the composer R. Murray Schafer. Schafer's book *The Soundscape: Our Sonic Environment and the Tuning of the World* ([1977] 1994) set out a theory of the sound environment and introduced the term "soundscape" into wide circulation. In many ways, Schafer's way of working was *opposite* to that of the new musicologists. Where they listened for traces of history in musical works, Schafer set out to "treat the world as a macrocosmic musical composition" ([1977] 1994, 5).

According to Schafer ([1977] 1994), the "acoustic environment" of our daily lives is like music insofar as it can be *read* to discern structure: it is made up of "keynote" sounds that form the background and anchor all other sounds, "signal" sounds in the foreground that people in a locale consciously listened to, and the "soundmark," "a community sound which is unique or possesses qualities which make it specially regarded or noticed by the people in that community" (9–10). The soundscape can also be recomposed to rid it of inharmonious elements. Encouraging the active shaping of everyday sound environments as if they were music was the aim of Schafer's "acoustic ecology" movement and "soundscape studies" agenda (4). He turned to history to show that such acoustic planning had been erroneously overlooked in the age of modernity. He found in historical "earwitness" accounts from the past evidence of a rising tide of inharmonious noise accompanying the industrial and machine era. "Earwitness" accounts of past soundscapes, found in literary texts and oral histories, were used by Schafer, and followers such as communication researcher Barry Truax (2001), to theorize both the component parts of the soundscape *and* the different kinds of historical listening attention that it produced. Truax (2001) identifies three kinds of listening-to-the-environment: "listening-in-search," which is "a conscious scan of the environment for cues"; "listening-in-readiness," which "depends on associations being built up over time, so that the sounds are familiar and can be readily identified"; and "background listening," which "occurs when we are not listening for a particular sound, and when its occurrence has no special or immediate significance to us" (23–24). These forms of listening are fundamental to what Truax (2001) calls "acoustic communication," the ability of listeners to discern important information about their social and natural environments.

Both Schafer and Truax argue that historical changes in the modern soundscape disrupted the balance of "acoustic communication." Premodern "hi-fi" sound environments, in which foreground signals and auditory information were clearly audible, gave way in the nineteenth century to modern "lo-fi" soundscapes, in which meaningless and distracting background noise made it harder to listen (Truax 2001, 23). Truax writes: "Within the hi-fi environment, the listening process is characterized by interaction. One does not have to 'fight' to make sense of it. Rather, it invites participation and reinforces a positive relationship between the individual and the environment" (2001, 23). In contrast, "the most common sounds of the modern environment"—such as "traffic, electrical hums, and air conditioning"—are "low information, high redundancy sounds" (25–26). Schafer and Truax did not aim to establish a new sound history movement. Rather, history was for them a means to an end: by showing that soundscapes had changed over time, they hoped to prompt action to change their own sound world, lessening the impact of the sounds they viewed as damaging to the needs of healthy "acoustic communication."

Mark Smith's suggestion that the field of sound history might best be described as "historical soundscape studies" (2004b, 365) comes closest to describing the priorities of the field as it emerged and developed in its first two decades, acknowledging as it does the debt to Schafer. The Schaferian approach was not adopted wholesale: most historians, like Emily Thompson (2004), reject his *a priori* negativity to technological noise, as well as his evident ideological commitment to the "audio-visual litany" outlined by Sterne (2003), but nevertheless, they adopt the concept of the soundscape as a useful way to describe the fundamental territory of sound history. Thompson (2004) speaks for many sound historians in writing that a soundscape is "a physical environment and a way of perceiving that environment. It is both a world and a culture constructed to make sense of that world" (1). The soundscape concept proved appealing to historians for a number of reasons. On a basic level, it described the interface between physical environments and social patterns of perception, and it provided a model for accounting for a world of nonmusical sounds. More than this, it was adopted by historians because it contained *historical change* as a fundamental component. If cultures of sound and cultures of making sense of sound change over time, then sound could enter the remit of the historian, who might chart the coming and going of "Victorian soundscapes" (Picker 2004), "Nazi soundscapes" (Birdsall 2012), and "the soundscape of modernity" (E. Thompson 2004).

As evidently influential as the concept of the soundscape has been in sound history, even more fundamental, though less clearly so, was Schafer's notion of the "earwitness" and the epistemology that underpins it. In the Schaferian model of sound history, the audible past is a lost but recoverable environmental reality that the historian can know by listening through the ears, via description in written and verbal accounts, of those who heard it. Some historians, such as Bruce Smith (1999) and Atkinson (2016), combine written accounts of listening with attempts to model the physical acoustics of historical sound environments, such as churches, courts, and villages. But on the whole, as historian Daniel Morat (2019) notes, sound historical analysis is fundamentally concerned with "the reconstruction of meanings that belonged, or were ascribed" to sounds (593). For both Schafer and the sound historians who adopted some elements of the soundscape approach, earwitnesses captured both the sounds of the past and past ways of understanding those sounds in their written accounts of listening. The historian can listen through the ears of the historical hearer by decoding the meanings in their written accounts of sound.

An example of this approach is musicologist Rebecca Geoffroy-Schwinden's (2019) treatment of a "web of sonic knowledge" in eighteenth-century Paris (239). Geoffroy-Schwinden takes references to Parisian sounds from a range of different written source materials and contextualizes them in relation to, for example, Denis Diderot and Jean d'Alembert's *Encyclopédie*, "a contemporaneous publication that offers widely accepted definitions of various subjects in eighteenth century France" (239). Geoffroy-Schwinden's (2019) analysis shows that the meanings attributed to the voice in eighteenth-century France differed from today's understanding, with the former including a "firm distinction between 'the people's voice' (a consensus) versus 'the public voice' (inar-

ticulate noise of the masses)" (239). For the historian, Geoffroy-Schwinden explains, this information "nuances our understanding of an earwitness account that describes a swelling public voice. Although our twenty-first-century sensibilities might interpret such a description as a positive, democratic sentiment, the *Encyclopédie* definition elucidates that the phrase actually describes popular complaints as insignificant babble" (239). This is what Mark Smith (2004a) means when he describes the work of the historian as "listening to the past" (ix). It is a listening mediated by contextualizing sources that bring the historian out of their own listening context and into the soundscape of the past.

It should be noted that the soundscape approach is less prominent in intellectual histories of sound such as Erlmann's (2010) and is notably rejected by Sterne (2003). Sterne (2013) perceptively identifies the origins of Schafer's "hi-fi" and "lo-fi" language in a distinctly masculine, mid-twentieth-century culture of domestic music listening, pointing out that "[t]he very definition of the hi-fi soundscape borrows its morphology from the aesthetics of the hi-fi record and hi-fi system in the bourgeois living room" (188). Nevertheless, even without Schafer's influence, historians such as Erlmann (2010) and Sterne (2003) share the confidence of other sound historians in the existence of a knowable auditory past that can be accessed through past listeners' ways of hearing, the essence of the concept of earwitnessing. They, like other sound historians, use description of sound, hearing, and listening, drawn largely from printed sources and textual archives, to reconstruct the auditory past, whether as an environmental soundscape to be molded, as in Emily Thompson (2004), or as a web of technologically mediated sound expressing and reproducing the culture of modernity, as in the case of Sterne (2003). Mark Smith (2015) offers the most explicit exposition of the "reading" method at the heart of sound history, explaining that even where sound recordings of the past are available to the historian, "printed evidence offers a far more robust way to access the sounds of the past" (61). Smith continues: "Aural metaphors, similes, onomatopoeia, and everyday descriptions did the work of recorded sound admirably and, used with care, used with an attention to context, can tell us a great deal about the meaning of sounds in the past" (62). Smith goes still further, adding that "even if we did magically manage to listen to electromagnetically reproduced sounds from slavery in the 1850s or the whizz of bullets and the boom of cannon from the American Civil War—we would be better off eschewing this evidence in favor of written and printed descriptions of what these sounds meant to the various constituencies of the time" (62).

The inevitable consequence of this reliance on earwitnesses whose description of listening allows us to hear through their ears is that certain kinds of historical hearers have emerged more clearly than others in sound history. Mark Smith's (2001) recovery of slave ways of listening is more the exception than the rule in this respect. The listening that is *listened through* in sound history is, more often than not, that of the expert hearer. From the new listening technicians of telegraphy, stethoscopy, and field recording covered by Sterne (2003) to the architectural acousticians centralized by Emily Thompson (2004), the writers and anti-street music agitators identified by Picker (2004), and the lawmakers and noise control engineers that Bijsterveld (2008) interrogates, the historical listening recovered in sound history has primarily been that of a self-conscious listener, aware of their specialist sonic skills. Bijsterveld (2019) explicitly centralizes the recovery of these "sonic skills" in the past. To be clear, including works such as Bijsterveld (2019) in this section is not to suggest that accounts of expert listening do not still have much to reveal to the historian about the auditory past. It is simply to voice a note of caution about a trajectory of research that has a narrow range of listening subjectivities recovered from the past and that does not often pause to question whose listening is being recovered. For example, Corbin's (2018) *History of Silence* passes no comment on the limitations of relying on those few historical hearers who "remained sensitive" to silence in a noisy age: "a few solitary walkers, artists and writers, practitioners of meditation, those who have withdrawn to a monastery, a few women who visit graves and above all, lovers who gaze wordlessly at each other" (2). The limitations of relying on this narrow range of wise listeners should be clear enough to most readers.

PRESENT

It was Mark Smith (2015), looking back on the field he had helped to found, who proposed that scholars should think of sound history as "historical acoustemology" (55). As I observed above, the term was developed in the field of social anthropology by Feld (1982) to account for the listening practices of the Kaluli people, an Indigenous community living in a rainforest area of Papua New Guinea. Feld used data from ethnographic fieldwork to show that "the Kaluli had a sophisticated understanding and appreciation of their sound-rich rainforest environment" (Rice 2018, 1). In contrast to urban societies, the Kaluli depend primarily on their sense of listening to gain knowledge of the world, according to Feld. Indicating more than just a way of knowing the environment, the word "acoustemology," as used by Feld (2015), refers to "an accumulated set of hearing, listening, and sounding practices consolidated as culture" (Rice 2018, 1). In the case of the Kaluli people, this manifests in an "ethno-ornithology," in which birds are heard "as spirits" and interpreted "as the voices of ancestors" (Rice 2018, 2). Acoustemology has been adopted as a method in social anthropology (see, for example, Gieser 2019). In this context, it refers to an ethnographer's analysis of listening as a source of selfhood, identity, and community. For example, Rice (2013), who conducted his research in Western hospital environments, uses the term "soundselves" for subjects (patients) whose sense of self and relationship to others is derived from listening (to the hospital and its staff).

On the face of it, acoustemology would not seem to be a natural fit for the historian. Historians cannot directly observe the listening practices of the past in the same way that the ethnographer observes the listening practices of the present. They cannot directly hear what past listeners heard or ask them why they listened. Even historians such as Bruce Smith (1999), who explicitly embrace the possibility of recovering historical listening-as-knowing in the terms set out by Feld, note that the theory of acoustemology "does not engage the questions that shape the study of sound as an historical phenomenon" (B. Smith 2004, 390). These questions center fundamentally on what is possible for the historian to know about past listening subjects. As the previous section argued, sound history has arrived at a settled methodology of recovering sound environments and listening practices through written descriptions. It is clear to see why Mark Smith (2015) is tempted to describe this as "acoustemology." So many of the listening encounters recovered from the historical record point directly toward a historical subject who gathered knowledge of their environment and society by listening to it. Musicologist Kassandra Hartford (2017) shows that soldiers gained knowledge in the trench warfare of the First World War by listening intently in new ways to their surroundings. Spanish studies scholar Samuel Llano (2018) documents how social elites listened to noise in the nineteenth-century city as a way of controlling social space. Historian of science Joeri Bruyninckx (2018) details the importance of listening via sound recording to the scientific study of birdsong.

However, the present moment in sound studies is characterized by a critical reassessment of the knowledgeable listener. The epistemology of listening as a method, including the "listening to" method of sound history, has been called into question. Schafer, as the "de facto founder" of sound studies (Novak and Sakakeeny 2015, 7), has become something of a lightning rod for this critical debate. Ethnomusicologists David Novak and Matt Sakakeeny (2015) note that Schafer's influence has been responsible in part for sound studies being "deeply committed to Western intellectual lineages and histories" (7). They continue: "Sound studies has often reinforced Western ideals of a normative subject, placed within a common context of hearing and listening" (7). They suggest that Schafer ([1977] 1994) accounts for only one kind of listener—White, male, settler colonial, and "modern"—and does not acknowledge "the constitutive differences that participate in the 'soundscape' as a multivalent field of sounds with divergent social identities, individual creativities and affordances, biodiversities and differing abilities" (Novak and Sakakeeny 2015, 7). It is worth accounting for the two central critiques of "normative listening" before returning to their consequences for sound history.

First, race has been at the heart of these critiques. In an influential blog post entitled "On Whiteness and Sound Studies," English and American studies scholar Gustavus Stadler (2015) drew attention to the extent to

which the "wondrous" modernity of "such world-rattling phenomena as the disembodiment of the voice," which was made possible by phonography, was "an implicitly white experience." Black Americans "were frequently reminded that the marvels of modernity were not designed for them" by recordings of "coon songs" and news reports "that reenacted the lynchings of black men" in the early sound recording era (paras. 3 and 2). English and American studies scholar Jennifer Lynn Stoever (2015, 2016) details the extent to which attending to the Black American experience undoes some of the fundamental categories of sound studies. For example, Stoever (2015) shows that "noise" was defined not only as an inefficient waste product or as disruption to domestic peace in twentieth-century America, but also, on the pages of the *Amsterdam News*, New York's "leading black newspaper," as "community defining and key to forging shared space" (145). Stoever describes the counter-discourse of the *Amsterdam News*'s description of noise as "decolonized listening," "a critical practice making connections between black and Puerto Rican New Yorkers much more audible" (145). In a more recent work, Stoever (2016, 7) uses the term "listening ear" to describe the ways in which apparently neutral and objective ways of hearing the world, such as the hearing of noise as disruption, filter audible phenomena through ideologies, among them Whiteness. According to Stoever (2016), the White listening ear imposes "the sonic color line" in American culture, a term which refers to the "process of racializing sound—how and why certain bodies are expected to produce, desire and live amongst particular sounds—and its product, the hierarchical division sounded between 'whiteness' and 'blackness'" (7). Via the White listening ear, "certain associations between race and sound come to seem normal, natural, and 'right'" (7–8).

For example, "noise" in modern America is *both* the disturbance to office workers caused by city motor traffic described by Emily Thompson (2004) *and* "[t]he sound of hip-hop pumped at top volume through car speakers," which "has become a stand-in for the bodies of young black men" (Stoever 2016, 13). The logic of disruption naturalized by the first kind of noise discourse lends its naturalizing power to the second. That sound studies scholars have predominantly heard the first kind of noise rather than the second is a symptom of the kind of Whiteness outlined by Stadler (2015), who notes that key textbooks in the field tend to engage with race only in relation to Black music genres such as hip-hop. As a consequence, writes Stadler (2015), "it is hard not to hear the implicit message that no sound-related topics other than black music have anything to do with race" in sound studies (para. 6).

Such critiques have begun to be answered by texts that rethink the politics of listening-as-knowing in academic research about sound. Indigenous arts scholar Dylan Robinson (2020) returns to soundscape theory's place of origin, Canada, to reframe the "ecological" listening of the World Soundscape Project as "settler colonial listening" (10). Robinson notes that Schafer described the "Eskimos" as "an astonishingly unmusical race" whose singing is like "Sir Winston Churchill clearing his throat" (Schafer 1961, 72, quoted in Robinson 2020, 1). Robinson (2020) asks of this quote: "Can you hear settler desire for Indigenous 'presentability' or 'civility'?" Perhaps, Robinson adds, "it is impossible to hear anything beyond Schafer's own voice, with its opinionated rhythm, its racist timbre" (1). Robinson characterizes settler colonial listening as "hungry listening." It is "hungry" because, as with the settler colonial desire to exploit land and natural resources for profit, it listens only for Western meaning and order. It consumes Indigenous sound according to the norms of Western listening. It listens for aesthetic contemplation in the case of music and meaning in the case of language and other nonmusical sounds. "Hungry listening" is thus "listening for" familiarity; it is "hungry for the felt confirmations of square pegs in square holes, for the satisfactory fit as sound knowledge slides into its appropriate place" (Robinson 2020, 51). In contrast to Western listening habits, Robinson (2020) describes Indigenous sound cultures as structured by fundamentally different ontologies and epistemologies. Indigenous listening is less about "information" in its Western sense and more about "the affective feel, timbre, touch, and texture of sound" (38). Indigenous songs are affective records of history, territory, and law, which are intended to be understood by being felt. With their "tin ear" (38) for these listening cultures and their perception of them as savage and "restless," European settlers imposed, or "settled," their own modes of listening through techniques of reorganizing sensory perception, such

as organized hymn singing, "where the homophonic ideal of voices moving together was a corrective to the unruly voices of Indigenous people" (54).

Robinson (2020) argues that the field of sound studies has adopted much of this "hunger" for readily available knowledge about sound. Instead, a decolonized "critical listening positionality" would "prompt questions regarding how we might become better attuned to the particular filters of race, class, gender and ability that actively select and frame the moment of contact between listening body and listened-to sound" (11). Robinson's work is thus not only a theory of how non-Indigenous people should listen to Indigenous sound culture but a theory of a more general decolonized listening that is intended to prompt questioning of what it is possible for the academic listener to hear. Rather than impose a model of listening, sound studies researchers should become "no longer sure what LISTENING is" (47, Robinson's emphasis) as they enter into processes of "guest listening," which requires "new temporalities of wonder disorientated from antirelational and nonsituated settler colonial positions of certainty" (53). This mode of inquiry "does not mean that we [researchers] listen without intention, but rather that the work of listening is not predicated on use-value or the drive to accumulate knowledge" (Robinson 2020, 72). A decolonized listening practice would not promise to fully know its object of study, but would instead enable a conversation between settler and Indigenous communities. It would form a relational meeting point between two modes of attentiveness to sound, one from the researcher and another from the listening "territory" in which the researcher is a "guest" (53).

The second main critique of normative listening in sound studies comes from an emerging feminist perspective. Like Robinson's (2020) focus on the interaction between settler colonial and Indigenous listeners, these critics of normative listening take an intersectional approach, dealing with cultures of gendered sound and listening alongside racialized listening (see, for example, M. Thompson 2017b). They, too, begin with the problematic legacy of Schafer's soundscape theory as an epistemological foundation for sound studies (M. Thompson 2017a). Music theorist Annie Goh (2017) identifies Schafer ([1977] 1994) as the origin of a "sonic naturalism" in sound studies, which not only idealizes a quieter past but also normalizes a subject-object relation in listening that reproduces patriarchal knowledge cultures. Goh (2017, 285) argues that "Schafer's figure of the 'earwitness' as the attentive, 'authentic' listener is typical of the oft-implied ahistorical masculinist subject, who produces knowledge about 'the soundscape,' its feminized object of closer study." Schafer's legacy in sound studies is characterized by "a neglect to address the traditional subject-object relation" in how knowledge is produced "through sound and listening" (Goh 2017, 287). Rather than Schafer's "white, masculinist patriotism which reminisces with nostalgia about a quieter, 'more natural' past," Goh asks what a feminist epistemology, more critical about "*how* knowledge is produced," might hear (2017, 285, Goh's emphasis). Goh (2017) proposes reorienting our listening around "the figure of echo," in other words, the interaction between a sound and its environment, which mediates *between* "subject-object relationships in sound" (284). The "situated" knowledge researchers would gain from this kind of listening would be characterized by "embodiedness, dynamism, relationality, accountability, and a questioning of what knowledge is" as well as "acknowledgement of its partiality" (295). Robinson (2020) and Goh (2017) thus share an insistence that the researcher-listener must critique their listening "positionality" and acknowledge its presence in encounters with other sounding and listening bodies. They insist that, at the outset of one's work, the sound studies scholar must be prepared to encounter the echoes of *unfamiliar* sounds with *different* auditory logics and listeners.

Such critiques clearly complicate the notion of the historian "listening to" the past. Historians have rightly insisted that cultures of hearing change over time and that the meanings ascribed to sounds are not the same in the past as they are today. However, in their listening endeavors, they have also tended to find historical subjects engaged in forms of knowledge-gathering listening that reproduce their own desire to know the auditory past. They know through knowing subjects. Whether it is the listening experts who appear in auditory histories of science, technology, and medicine (Bijsterveld 2008; Sterne 2003; E. Thompson 2004), or writer-listeners who turn a close ear to their sound environments in literary sound histories (Boutin 2015; Picker 2004), or commu-

nity leaders setting norms for their listening communities in social histories of sound (Birdsall 2012; Corbin 1998), the listener that emerges in accounts of the auditory past is often engaged in the kind of "traditional" knowing-as-mastery identified by Goh (2017). On the one hand, this type of knowing is, of course, the kind that is the most apparent and legible in the surviving source material available to historians. On the other hand, the influence of Schafer's soundscape theory, centralizing as it does a normative listener striving to hear musical order in an increasingly disorderly sound environment, has undoubtedly also had a significant role to play in guiding the kinds of listening that sound historians have recovered. Rather than only serve as a label for what sound historians do or find in the past, the term "acoustemology" should instead, following the critiques levied by Robinson (2020), Goh (2017), and others, prompt reflection on how sound historians know and what kind of listening-as-knowing they find in the past.

Robinson (2020) suggests, based on an analysis of listening as settling, that histories of colonization and empire may be the best place to start for a reconsideration of acoustemology in sound history. The writing of such histories demands sensitivity to the "othered" sound and listening cultures of colonized peoples, as well as a decentering of Western listening practices. Sound history's *present* is thus represented by its expanding global frames of reference. In contrast to sound histories that seek to recover the significance of sound in Euro-American modernity, an emerging body of scholarship seeks to begin with perspectives from "the Global South" (Steingo and Sykes 2019). Ethnomusicologist Ana María Ochoa Gautier (2014) began this trend, tracing the role that listening and "aurality" played in the imagining of the postcolonial nation in Colombia. Taking account of both "lettered elites" and "peoples historically considered 'nonliterate' " (4), Ochoa Gautier shows how the postcolonial nation was forged by listening to a multiplicity of social and natural sounds, which were brought together to form the nation and "establish the historical divide between the colony and the postcolony" (28). In contrast to "fonocentric" accounts of colonized peoples, which highlight "the oral/aural knowledge of the subaltern [as] opposed to the occularcentrism of the elite" (17), Ochoa Gautier outlines a postcolonial aurality that developed across the sounding cultures of Indigenous and settler colonial listeners in the shadow of, but distinct from, modern European listening.

Calling for a remapped sound studies that takes the Global South as its point of departure, ethnomusicologists Gavin Steingo and Jim Sykes (2019) suggest that as scholars in this field incorporate more diverse sound cultures into their analyses, questions of epistemology should be joined by an openness to ontological difference too. They argue that "the various peoples of the world understand that which is heard in radically different manners" (11–12). In his history of Sri Lankan auditory culture, Sykes (2019) emphasizes the importance of attending to "non-Christian ways of defining the self, human-nonhuman relations, and how myriad beings produce ethics and sonic efficacies through listening to and using sounds" (221). He argues that sound history, with its focus on Euro-American, Protestant modernity, has proceeded from an assumption of secularization and has in turn documented "the historical growth of the ideological position it presumes" (209). Despite British colonial attempts to rationalize Sinhala Buddhist cultures in Sri Lanka, auditory traditions such as the *pirit* (Buddhist chant) persisted into the postcolonial period. The word *pirit* also means "protection." In the Sri Lankan Buddhist tradition described by Sykes (2019, 214), "When monks chant, they hold a thread (*pirit nul*) that may touch an object, such as a copper plate. Recitation channels protective power into the thread, charging the object." Sykes notes that "[p]eople buy copper plates that have been charged this way and hang them on their walls to protect their homes" (214). British missionaries wanted to suppress this sonic culture of protection because it was incompatible with their Christian beliefs. The "project of missionization required sublimating the Sinhala ontology of sound as protection because it involved beings (Gods, demons) that missionaries wanted to eradicate" (Sykes 2019, 215). Sykes implores historians to do better. Steingo and Sykes (2019) call for "politicised, historically situated, and culturally diverse narratives of sonic encounters in global modernity among variously defined peoples and their notions of sound" (3). This is a fine summary of what sound history should be.

A raft of emerging scholarship points increasingly in this direction. The work of historian Barbara Andaya Watson (2011, 2018) and ethnomusicologist Jenny McCallum (2017) on Malaysia and Singapore, historian Nimrod Ben Zeev (2019) on Palestine, historian Ziad Fahmy (2020) on Egypt, and sound ethnographer Leonardo Cardoso (2019) on São Paulo are all examples of histories that shift the frame from modern Europe and North America, tracing global encounters as the basis of sonic modernity. South Asian studies scholar Laura Brueck, film studies scholar Jacob Smith, and radio studies scholar Neil Verma hope that such work, including their own on India, will force sound studies to "confront the Western bias of its short institutional history" (Brueck, Smith, and Verma 2020, 13). Most compelling of the methodological innovations of this new globalized sound history is an emphasis on encounters *between* sounds, listeners, and cultures. For example, musicologist Rachel Beckles Willson's (2019) recovery of the oud as a musical instrument with a history of global travel and cultural negotiation points to new ways of "hearing global modernity" that were constructed at the cultural intersections of Europe and the Middle East.

Among the notable features of the current moment in sound history is the extent to which critical questions and new directions have been signaled by scholars working in music departments. Having been slow to join the sound history and sound studies movements in the early 2000s, musicologists and ethnomusicologists now increasingly think of sound studies as a fruitful meeting point with other humanities subjects and a terrain from which to critique the traditional conventions of their discipline. Ethnomusicology, in particular, represented by Ochoa Gautier and Sykes, has spearheaded new questions about the Western-centric nature of sound history. In addition to widening the frame beyond Europe and America, debates about affect percolating first within music disciplines are beginning to alter the how past hearing is considered in the field of sound studies. Theories of affect and affective atmospheres are associated primarily with human and cultural geography (e.g., Anderson 2009). They have been influential in new kinds of analysis of music in everyday life. These analyses, such as musicologist Anahid Kassabian's (2013) *Ubiquitous Listening*, switch the emphasis of research from musical texts to the embodied and emotional impact of music on listeners. This is not the place to rehearse the now well-documented debate about materialist versus culturalist approaches to sound that has emerged in relation to this strand of thinking. Claims that music studies should dispense with cultural analysis in favor of research on the vibratory physicality of sound, which are associated with music philosopher Christoph Cox (2011), have been countered by musicologist Brain Kane (2015) and music theorist Marie Thompson (2017b), who has labeled these claims an "ontological turn in sound studies."

It is important to note, however, the increasing emphasis on sound as felt and as encountered via the body. In his treatment of Indigenous sound cultures in Canada, Robinson (2020) points to the importance of feeling sound as well as understanding it. In its best forms, such as in the work Marie Thompson (2017a), the approach via affect, which emphasizes the need to understand what sound *does* in material and bodily terms, is a vital and necessary challenge to the emphasis on linguistic interpretation in sound history. However, in texts such as Mack Hagood's (2019) *Hush*, history appears to be awkwardly bracketed as "metaculture" and its significance is treated as secondary to the affective work done by sound technologies. The "affective turn" in sound studies heralded by texts such as cultural theorist Steve Goodman's (2010) *Sonic Warfare*, and the riposte and nuancing that these ideas have received in works such as Sykes (2018), will remain an important axis of debate and methodological development for sound history in the years to come.

FUTURE

The challenges to "normative" listening outlined above remain open and active for historians writing about the auditory past. I have written elsewhere about how sound historians might rethink their method as a form of "hearing with" rather than "listening to" subjects from the past (Mansell 2018, 2020). In addition to exploring

the historical webs of auditory meaning that sound historians have identified as important, the "hearing with" approach would acknowledge multiple points of access to that web, both exclusions from and outsiders to it, and the historian's own stake in reconstituting encounters with it. However, although the need for greater reflexivity about listening subjectivity is certainly necessary, the critical engagements that it will involve with musicologists, ethnographers, media theorists, and other participants in the interdisciplinary field of sound studies are hardly likely to inspire the wider adoption of "historical acoustemology" in the historical profession at large. I share Mark Smith's hope that attending to the auditory past will become a "habit" (2014, 13) not for only those scholars who see themselves as part of the field of sound studies, but for all historical researchers. Smith sees the future of sound history as the wider adoption by historians of a way of reading sources that attends to "tidbits of the acoustic, smatterings of the auditory, gestures of silence, noise, listening, and sound" (14). However, in my view, the rise of the interdisciplinary field of sound studies has hindered rather than helped the wider adoption of auditory methods. Rather than becoming a routinized way of working for historians, the listening methodology developed by the scholars represented in the first part of this article became instead one among many tools in the methodological tool kit of sound studies. That, and the original disciplinary capaciousness of the early sound history field, has kept auditory analysis from becoming a routine and widely adopted historical method; new visual literacies are still taken up by historians with far greater enthusiasm than auditory methods. Now, as music scholars are increasingly leading the debate about engagement with past sound, the risk is that "sound" will become, again, the exclusive terrain of music disciplines and the occasional sound-minded media scholar. Increasingly specialized debates about epistemology and listening, important though they are for committed sound historians, should be accompanied by the opening of new pathways toward dialogue with historians whose specialization is not in the area of sound culture.

The future of the field of sound history therefore lies in the recovery of new kinds of sources, the development of new ways of engaging with those sources, and a commitment to opening sound history to public listeners through new forms of public sound history. First, the question of sources. Historians have practiced a form of acoustemology that has privileged reading and the written word over all other forms of source materials. There have been good reasons for this. Ochoa Gautier (2014) argues that writing is a form of phonography that captures both the sounds that were heard in the past and the way in which past hearers made sense of them, describing this method as "[a]n acoustically tuned exploration of the written archive" (Ochoa Gautier 2014, 3). Writing *organizes* sound, according to Ochoa Gautier (2014), and analyzing the way it does this allows us to understand not only the historically specific meanings associated with sounds, but also the way in which sound has entered the structures of ideology and power. However, in focusing all their attention on developing a reading method for auditory analysis, sound historians have paid little attention to sound archives, that is, collections of recorded sound. This must strike the outside observer as rather odd. Such archives have played a small part in sound history as a whole, with histories of radio broadcasting being the outlying exception (e.g., Birdsall 2012).

Mark Smith's (2015) argument that we should "eschew" recorded sound because it offers the fallacy of direct access to past sound cultures should be revisited. If writing organizes sound and activates it for cultural work, such as the forming of national community, as Ochoa Gautier argues, so too does recording sound and choosing recordings for preservation. Geographer Tom Western (2015) shows that the recording of folk song in early twentieth-century Britain and the subsequent organizing of these recordings into a broadcasting library for the British Broadcasting Corporation was no less powerful a form of organizing sound for the nation than the writings that Ochoa Gautier (2014) analyzes. Other emerging work on sound archives shows that the sound recording itself can be treated as artifactual, its organizing logic not necessarily captured in text but nevertheless apparent in its archiving and in the forms of sonic encounter that its audio traces reveal. Birdsall and musicology–media studies scholar Viktoria Tkaczyk's research shows that "[f]rom around 1900, scientific sound archives in Europe were founded on the systematic collection, preservation, and study of phonographic recordings" and that "many of these projects staked encyclopedic and preservationist claims, mostly with the

aim of collecting and researching all the world's languages, musics, and sounds" (2019, S2). This sound collecting formed an important foundation for new academic disciplines, such as ethnomusicology and linguistics (Kaplan and Lemov 2019), but also, through the work of public archive institutions, was intended for purposes such as "national identity formation" (Birdsall and Tkaczyk 2019, S9). Bruyninckx (2019) shows, for example, that the British Library of Wildlife Sounds can be analyzed as an organizing logic for its constituent recordings, and interpreting it in this way can help us understand the intersecting evolution of biological science and public service broadcasting as auditory cultures of the nation. Birdsall and Tkaczyk (2019) demonstrate that sound archives *should* be the terrain of the sound historian.

Sound recordings taken by imperial sound recordists in colonial territories are well represented in sound archive collections; as a result, such collections form a potential entry point for Europe-based historians, especially, to researching the global sonic encounters identified by Steingo and Sykes (2019). The work of sound archive researcher Anette Hoffmann and historian Phindezwa Mnyaka (2014) is exemplary in this respect. Based on their research on recordings of an isiXhosa speaker from the Eastern Cape taken in a German prisoner-of-war camp, they argue that although such recordings are part of the "larger project of imperial knowledge production," the subaltern voice contained within them "may transgress the prescribed form intrinsic to the colonial archive's technique" and generate "an excess of meaning that cannot be reduced to that which can be transcribed" (140). Hoffmann and Mnyaka (2014) identify "instances of narrative agency that evade transcription and can only be retained by the trace of the recorded voice" (141). Thus, beyond the frame of the logics of the archive and imperialist knowledge-gathering, sound recordings can also reveal voices that appear nowhere else in the historical record.

Historians already know what to do with written archives. The call to make new use of them to find textual evidence of past sound and listening strikes me as less compelling than the promise of an entirely new archive of material, barely used by most historians, in the form of sound recordings. If extracting usable evidence from oral history recordings, environmental sound recordings, accent and language recordings, and so on involved sound historians leading others in a *new auditory method* that treated these sources not only as information but also as the product of historical cultures of hearing, listening, and sounding, sound history methodology would, I believe, gain much wider participation. Crucial to this would be enhanced scholarly dialogue between sound historians and sound archivists. The two professions are, at present, more separate than they should be. The current priority in sound archiving is the obsolescence challenge: sound recordings are often held in inaccessible formats, and many recordings are degrading to the point where they will be lost forever. In the UK, the British Library took the lead on a £9.3 million project called Unlocking Our Sound Heritage, which involved the digitization of millions of sound recordings held in archives across the country. The question of what it is, exactly, that constitutes "our sound heritage" and what we should do with it *should* be a debate ready-made for the sound historian's participation. However, because the sound history field has preferred written over sound archives, such participation has yet to develop.

The other form of source material that deserves greater consideration by sound historians is objects. Notably, although sound technologies play a central role in many sound histories, the sound technologies themselves, in their object form, are rarely used as sources for analysis. Instead, written archives and other kinds of published materials are drawn upon to interpret the significance of technologically mediated sound. Museums contain objects that *could* form the basis of new sound histories. Museum studies scholars are increasingly thinking about museums as sounding institutions and about the auditory history of museum collections (see, for example, Everett 2019 and Bailey, Broackes, and de Visscher 2019). Sound historians have not yet caught up with these developments and do not at present have a methodology for interpreting the materiality of sounding objects. Historians of hearing impairment are showing the way forward here, with historians Graeme Gooday and Karen Sayer (2017) and Jaipreet Virdi (2020), for example, making use of museum hearing aid collections and other material evidence to recover the history of deafness. Beyond sound recording and reproduction technolo-

gies, sculpture historian Ryan McCormack (2020) shows what can be done by paying attention to the auditory history of statues. McCormack shows that, far from silent, statues had sonic lives in cultural circulation, and he does so by beginning with case studies of the physical form and material lives of particular statues, such as the fascinating Tipu's Tiger, an automaton that contained a sounding mechanism that simulated the roar of a tiger and that has an intriguing imperial history. Beckles Willson's (2019) attention to the material form of the oud as it travelled between Middle Eastern and European contexts also reveals the value of drawing on material forms of sound culture. Especially interesting in Beckles Willson's account is the neglect of an oud held at the Royal College of Music Museum in London, where misidentification and neglect, revealing a European failure to listen, is apparent in the physical form of the object. Musicological research in the field that is sometimes referred to as "the new organology" also has much to offer sound historians (see, for example, Magnusson 2017; Sonevytsky 2008; Tresch and Dolan 2013).

In addition to making use of different kinds of archives and collections in historical acoustemology research, there is also the matter of approaching sources. Here, sound history has an opportunity to reach beyond its narrow limits by taking an active part in shaping new digital research methods. The millions of sound recordings newly digitized by the British Library, and at other sound archives, will become sound "data," to use Birdsall and Tkaczyk's term (2019). Researching that data will not be the same as entering an archive of printed and written materials and reading them one by one. English scholar Mary Caton Lingold, musicologist Darren Mueller, and English scholar Whitney Trettien argue, however, that the digital humanities have so far shown very little interest in sound, dominated as it is by a "text-centricity" (2018, 9). Sound, they argue "remains perhaps the least utilized, least studied mode within digital humanities" (10). Digitized sound archives are made searchable by text metadata tagging. "Simply put," Lingold, Mueller, and Trettien argue, "making audio content accessible means rendering it as text" (10). "Few projects and fewer tools incite scholars to *listen*," in the digital humanities (10, Lingold, Mueller, and Trettien's emphasis). Sound historians, with their long-standing interest in listening as a method, are well placed to lead the development of a digital historical acoustemology. The shape that this methodology might take is unclear, but creating it is an exciting challenge for the future.

Existing digital sound history, such as that outlined by Geoffroy-Schwinden (2018), tends to use digital platforms as a means of disseminating sound history to public audiences. One example of this is *The Roaring 'Twenties* online sound map, a website based on Emily Thompson's (2004) research on New York noise that allows visitors to click on pins attached to a map of 1920s New York and hear sound files or read textual excerpts related to noise complaints (on this sound map, see E. Thompson 2015). Geoffroy-Schwinden's (2014) site, *Organs of the Soul: Sonic Networks in Eighteenth-Century Paris*, which forms part of the Provoke! digital sound studies project at Duke University, opens up textual sources about sound to web visitors, who can read and hear about how historical listeners understood the sounds around them. Geoffroy-Schwinden (2018) argues that historians should get over their squeamishness about historical sonic "re-enactment" and embrace the ability of digital tools to engage "both the scholar and her audiences in confrontations with historical acoustemologies" (244). What is missing in the emerging practice of and reflections on digital sound history, however, is consideration of how auditory methods might be developed in response to and within the new digitized sound archives. As Lingold, Mueller, and Trettien (2018) suggest, finding ways to listen to digitized historical sources is a significant challenge that has the potential to transform not only sound history but the digital humanities too.

Finally, there is the question of public history. If listening to (or hearing with) the past matters, or in other words, if understanding the auditory dimensions of experience through speech, music, noise, and silence is essential to understanding subjectivity and social space in history, then sound historians must be ambitious in their endeavors to share what they do with a wide public audience. The digital projects mentioned above, such as *The Roaring 'Twenties*, have begun this work, as have translations of sound historical scholarship into museum exhibitions, such as that discussed by Bijsterveld (2015) on the auditory history of Amsterdam. Overall, emerging efforts in what might be described as public sound history focus on delivering contextualized listening experi-

ences to museum and other public audiences. Emily Thompson (2015) and Bijsterveld (2015) argue that when we encourage public listeners to engage with the auditory past, we must provide not only audio experiences but also contextualizing textual sources that help to explain how sounds from the past were heard. Bijsterveld (2015) gives the example of Amsterdam's Barrier Bell (*Boomklok*), explaining that "[u]p to the end of the 1870s, this bell informed shipmasters that the wooden barrier between the *Damrak* waterway and the river *IJ* was about to open or to close. It was audible on the Dam. But if we were to hear it today without any contextual information, we would very probably not be able to understand its meaning" (77).

In its next phases, public sound history must do more than just contextualize past sounds. Public sound history should become the forum in which sound historians *learn to hear*. By listening *with* diverse public audiences, sound historians can situate and critique their "listening positionality," to borrow Robinson's phrase (2020). Rather than deliver apparently objective meaning contexts to museums and their public audiences, sound historians could work with public listening groups—a format that I have begun to investigate in my own work with England's National Science and Media Museum in Bradford—to establish what to listen for in the first place, how to listen to it with different kinds of ears, and how to make what was heard in the past meaningful again in the present. Listening groups such as these would develop a co-produced listening not reliant solely on the "listening ear" of the historian but drawing also on active and engaged public listeners. Engaging public listening to the past in this way would counter and complicate *the other* dominant form of public listening practice, a form that is far more commonplace than the contextualizing work described by Bijsterveld (2015). This form is derived directly from Schafer ([1977] 1994) and his "acoustic ecology" movement.

In the Schafer-inspired "acoustic ecology" mode of public engagement, *listening* is promoted as essentially good, since it connects us to our environments in deeper and more meaningful ways than seeing does. This fundamental assumption underpins public engagement practices such as online sound mapping and environmental sound walking, which are routinely used in arts and urban planning contexts, often to engage audiences with the past (see, for example, Maddeaux and Bowditch 2019). Sensory ethnographer Jacqueline Waldock (2011) perceptively draws attention to the masculinist epistemological underpinnings of online sound map projects in their prioritization of public "soundscapes" over private, domestic sound worlds. Heritage researcher Paul Tourle (2017) similarly argues that apparently neutral invocations to listen are always ideologically framed, as in the case of the British Library's *Sounds of Our Shores* sound map project, which encouraged listening to the British coastline but did so in ways that directed listening attention to the sounds of nature and of touristic encounter. Picking up on critiques of sound studies' Whiteness, Tourle describes this focus on nature sounds as operating as a kind of "white noise" that obscures the coastal sounds that are not heard, including the cries of migrants desperate to reach the shores of the United Kingdom. As Robinson (2020) and Goh (2017) show us, listening is not an intrinsically ethical act. Only if that listening is "situated" in the politics of the past and of the present might it become ethical in public sound history.

The kind of co-produced, intersubjective public sound history I have in mind can also benefit from embracing emerging digital methods. Digital archaeologists Shawn Graham, Stuart Eve, Colleen Morgan, and Alexis Pantos (2019) argue persuasively that rather than seek to recover and fix meanings associated with past sound, we might use techniques such as audio augmented reality to facilitate affective encounters with past sounds, taking us into situations of encounter with unfamiliar subject positions. I share the view of Graham et al. that treating past sounds in this way may "radically reprogram, repatriate, decolonize, and contest spaces," and that such public sound history can "prompt the kind of historical thinking we should wish to see in the world" (2019, 231). Taking a related approach, computer scientist Christian Mortensen and cultural studies researcher Vitus Vestergaard (2013) showed that audio-augmented reality opens possibilities for embodied engagement with past sound. They deployed Danish radio archive broadcasts to augment period-specific domestic interiors in a museum where visitors were encouraged to physically engage with domestic objects while listening. Graham et al. (2019) and Geoffroy-Schwinden (2018) argue that it does not matter if the listening created in these kinds

of digital projects is inauthentic, since its primary purpose is to generate a historical acoustemology that encourages new forms of attention to the past in the present. The kind of public sound history outlined here should not be viewed as an adjunct to sound history proper or simply as public dissemination of it. My argument is that the sound historian should *listen in* and *listen with* public(s) as a fundamental component of a new form of historical acoustemology open to different ways of hearing in the present as well as multiple forms of listening in the past.

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